

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 8 and 10-24 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

Appeal

Applicants note that the current action has been given in response to the Appeal Brief which was filed on March 24, 2006. Although the Examiner has made no comment concerning the appeal, it is assumed that the previous final rejection has now been removed in view of the Appeal Brief and that the current rejection is being submitted in its place. The Examiner is requested to confirm this fact.

Applicants note that the claims are being rejected over the same three references which were presented in the previous final rejection. Applicants do not understand the wisdom of removing a final rejection and then starting over with the same references in a new rejection. Applicants realize that a few of the claims have been removed from the first rejection which includes two references and are now rejected over the three references in the second rejection. Nevertheless, Applicants wish to point out that 8 rejections were presented previous to the Appeal Brief. The Appeal Brief was an attempt to settle the issues and to end the prosecution of this case which has been pending for five years. While Applicants appreciate the removal of the final rejection, it is not seen to advance the prosecution by merely proceeding with the same references with a slight rearrangement of the claims rejected from each combination. Applicants request the Examiner to try to resolve the issues in this application either by allowing the application or by submitting it to the Board of Appeals for a final determination.

Applicants submit that the previous Appeal Brief included strong arguments against both of these rejections and these arguments are hereby incorporated by reference and should be considered in regard to the present rejections.

Rejection under 35 U.S.C. §103

Claims 8, 11-13, 16-18 and 21-23 stand rejected under 35 US.C. as being obvious over Budelman (U.S. Patent 6,244,331) in view of Hsieh (U.S. Patent 5,377,745). This rejection is respectfully traversed.

The Examiner states that Budelman shows a heat sink with a centrifugal fan including shaft 532, blades 526, heat sink 410, first cooling fins 430, second cooling fins 428 and an annular cavity 416. The Examiner admits that this reference fails to disclose that the second cooling fins have a lower portion with the rotary shaft located above this lower portion. The Examiner relies on Hsieh to disclose a cooling device that provides second cooling fins having a lower portion with the shaft located above the lower portion and a rotary shaft positioned away from the lower portion. The Examiner feels it would have been obvious to modify the Budelman device by providing second cooling fins having a lower portion.

Applicants submit it would not be obvious to combine these two references. First, Budelman discloses a space 418 into which the motor and shaft are placed. No lower portion is provided in this section. The Hsieh reference shows two types of fins having different heights with the blades being above the lower fins. However, this arrangement does not include an annular cavity for receiving the blades. Applicants submit that it would not be obvious to combine the two references. First, the Hsieh reference shows an axial fan. Accordingly, it would not be obvious to refer to such an arrangement to modify the Budelman device. Secondly, the Hsieh device does not show the lower fins being mounted just under the blades, but instead occupy the entire square inside a single outer row of taller fins. There is also no teaching in Hsieh of the concept of extending the blades between the fins. For these reasons, Applicants submit that one skilled in the art would have no reason to look to Hsieh to modify the Budelman device. Applicants submit there is no motivation for making such a combination. Further, Applicants have amended claim 8 to include the limitations of claim 9. Since claim 9 was not rejected over this combination of references, Applicants submit that this rejection is overcome as well.

Furthermore, claim 8 now describes the cover formed on the heat sink and centrifugal fan and that the motor is mounted onto the cover away from the heat sink.

This is clearly different from Budelman where the motor is mounted directly on the heat sink. Hsieh does not show the motor at all, but presumably it would be mounted on the mounting plate 15. Accordingly, Applicants submit that claim 8 defines over this reference.

Claims 11-13 depend from claim 8 and as such are also considered to be allowable. In addition, each of these claims recite other features that make them additionally allowable.

The Examiner has rejected claims 16-18 and 21-23 over this two-way combination of references. This is not understood since claim 14 from which claims 16-18 depend and claim 19 from which claims 21-23 depend have not been rejected over this same combination. Rather, the independent claims have been rejected over the three-way combination. This is an indication that the Examiner feels that claims 14 and 19 are not obvious over the two way combination. Accordingly, it is not understood how the dependent claims which depend from these independent claims can be rejected over the such a two way combination. The Examiner is respectfully requested to explain how he feels this is possible.

Claims 9, 10, 14, 15, 19 and 20-24 stand rejected under 35 U.S.C. § 103 as being obvious over Budelman in view of Hsieh and further in view of Miyahara et al. (U.S. Patent 5,940,268). This rejection is respectfully traversed.

The Examiner admits that the combination of Budelman and Hsieh do not disclose a cover formed on a heat sink and a centrifugal fan where the cover serves as an air seal. The Examiner relies on Miyahara to show a cover 8 formed on the heat sink and centrifugal fan. The Examiner feels it would have been obvious to add the cover of Miyahara to the combination of Budelman and Hsieh.

Since Applicants have amended claim 8 to include the limitations of claim 9, claim 8 will also be considered in the consideration of this rejection.

First, Applicants submit that it would not be obvious to one of ordinary skill in the art to add the teachings of three different references together as suggested by the Examiner. While Miyahara does show a cover arrangement, there is no indication of why one would be motivated to use a cover of the type shown in that reference with the other two references which are structurally different. The Miyahara devices shows

the cover having inlets on different sides in different directions. Applicants submit that the cover presented there is different from that of the present invention and further that it would not be obvious to utilize such a cover in conjunction with the other two references.

Furthermore, Applicants submit that the comments mentioned above concerning the Budelman and Hsieh references also apply here.

Applicants also point out the comments made in the Appeal which was previously filed. Claim 8 now further includes the cover from the heat sink and the motor which is mounted onto the cover away from the heat sink. Neither Budelman nor Hsieh shows such a cover as admitted by the Examiner. The Miyahara reference shows a cover however, as seen in Figure 3, the motor 6 is mounted on the surface of the heat sink substrate 2 rather than the cover. (See Column 3, lines 4 and 5.) Applicants submit that none of the three references teaches the concept of mounting the motor on the cover and away from the heat sink. Accordingly, Applicants submit that claim 8 is allowable.

Claim 14 is another independent claim which includes a number of the limitations found in claim 8. Claim 14 specifically includes the motor mounted onto the cover away from the heat sink and also having corners of the cover directly contacted to the first cooling fins. As pointed out above, both the Budelman and Miyahara et al. references show the motor mounted on the base and Hsieh indicates that the motor should be placed on the mounting plate 15. Accordingly, none of the references teach that the motor is mounted on the cover. Furthermore, Applicants note that this claim states that the corners of the cover contact the cooling fins. Miyahara does not show this arrangement. Since the other two references do not show a cover, Applicants submit that this limitation defines over any of these references or their combination.

Claim 19 is another independent claim which has been amended to recite the motor mounted on the cover away from the heat sink. Applicants have also moved part of the second paragraph describing the arrangement of the blades to the final new paragraph. However, the language that has been moved remains the same. This claim now also describes the motor which is mounted on the cover away from the heat

sink in the same fashion as claims 8 and 14. Thus, this claim is also allowable for the same reasons recited there. Claim 19 further describes that the air flows in the axial direction of the centrifugal fin into the heat sink from the inlets of the cover and flows in radial direction of the centrifugal fin out of the heat sink. Applicants submit that the references fail to show a cover having the air flow in this direction. Miyahara has a cover with the air entering through opening 20 in the horizontal direction and then drawn down through the center and exiting out outlet 14. However, these openings are not in the radial direction but in the horizontal direction.

Claim 14 is another independent claim which has also been amended. The last paragraph of this claim now describes the motor being mounted onto the cover for driving the rotary shaft. Applicants submit that none of the references teach the mounting of the motor onto the cover as described above. Accordingly, Applicants submit this claim is allowable as well.

Claims 10-13, 15-18 and 20-23 depend from allowable independent claims 8, 14 and 19, respectively, and as such are also considered to be allowable. In addition, each of these claims recite other features that make them additionally allowable.

CONCLUSION

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse, Reg. No. 27,295, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

KM/RFG/cm

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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